Department of the Navy
Science and Technology

Strategy for the 21st Century

Meeting Navy and Marine Corps Needs Through Innovation

Today … Tomorrow … Always

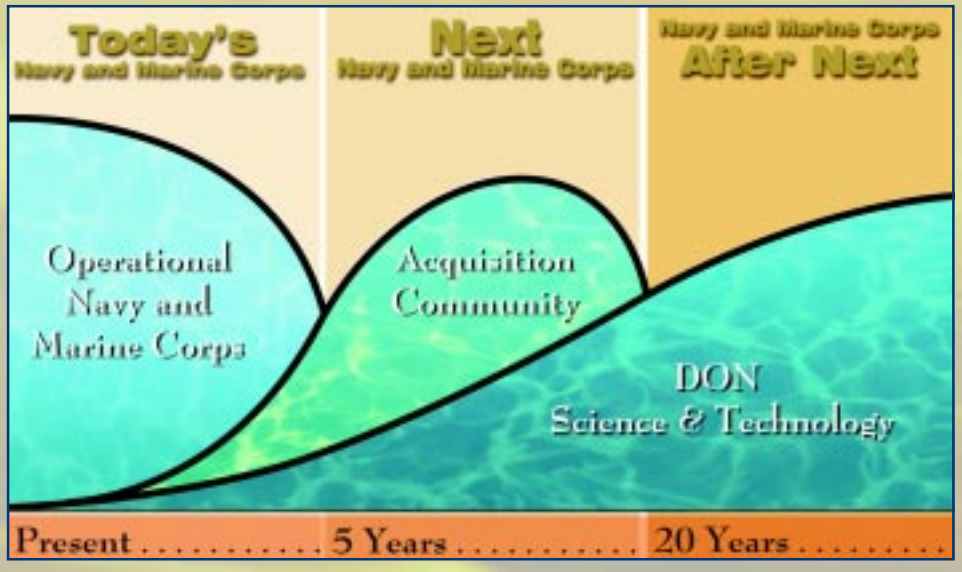
Today's Navy and Marine Corps are forward deployed—at sea and afield. The capabilities that make today's Navy and Marine Corps second to none in the world are the result of science and technology (S&T) programs that began as many as 50 years ago.

Major new platforms, weapons, doctrines, and tactics yield fundamentally new capabilities. These produce the Next-Navy and Marine Corps … always evolving.

Beyond the horizon of Joint Vision 2010 lies the Navy and Marine Corps-after-Next. Shaped by endless possibilities, it is motivated by the ingenuity and imagination of today's visionaries.

In short, Science & Technology:

- *Inserts mature technologies into Today's Navy and Marine Corps*
- *Focuses the most applied parts of the Navy and Marine Corps S&T program on technologies to meet highest priority future Navy and Marine Corps capabilities*
- *Maintains a broad, world-class technology program to seed the Navy and Marine Corps-after-Next.*



Vision

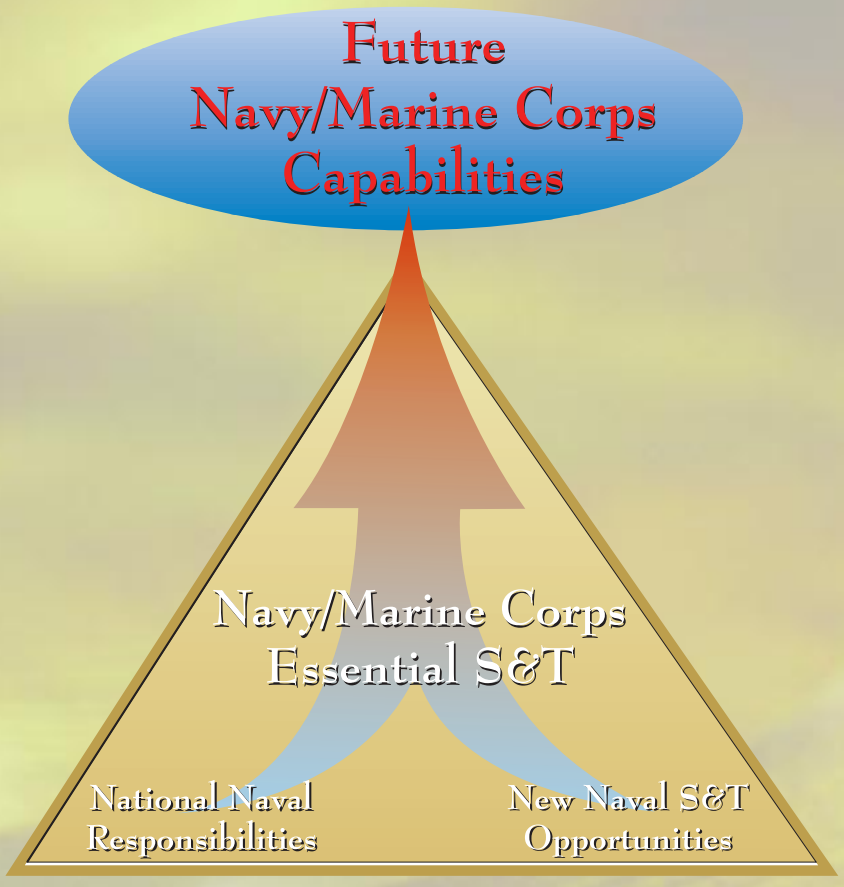
Innovation: A process that couples discovery and invention with exploitation.

Philosophy

- To maintain a Science and Technology portfolio focused on advancing the unique capabilities of the future Navy and Marine Corps team.
- To ensure affordable future Navy and Marine Corps capabilities through integrated basic research, applied research, advanced technology demonstrations and manufacturing technologies programs.
- To maintain national superiority in areas of essential Navy and Marine Corps needs, such as ocean acoustics, ship hydrodynamics, and littoral mine countermeasures that are not adequately supported for the Nation by other Federal agencies or industry.
- To sustain a world-class, multidisciplinary corporate laboratory.

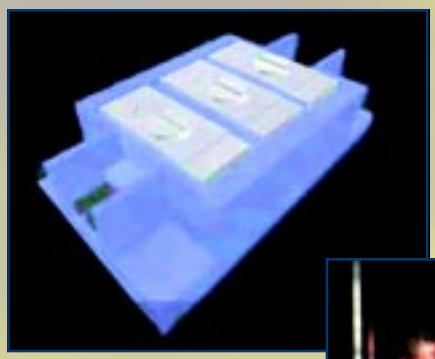
Portfolio Investment Strategy

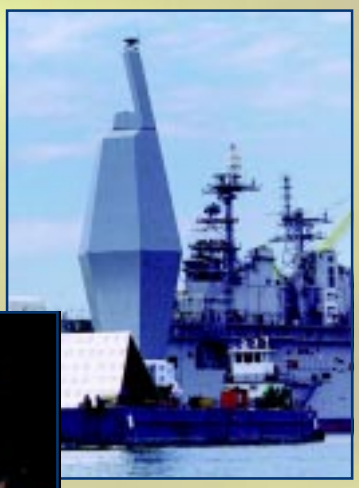
- Maintain a diverse portfolio of integrated thrusts that address:
  - Options that rapidly transition new technological capabilities to today's Navy and Marine Corps and the Next-Navy and Marine Corps, through tightly focused S&T projects featuring demonstrations and at-sea experiments;
  - Programs that maintain the health of fields that the Navy and Marine Corps must steward; and
  - Science and Technology that is essential to the Navy and Marine Corps-after-Next, and that leverages global efforts to ensure technological superiority.

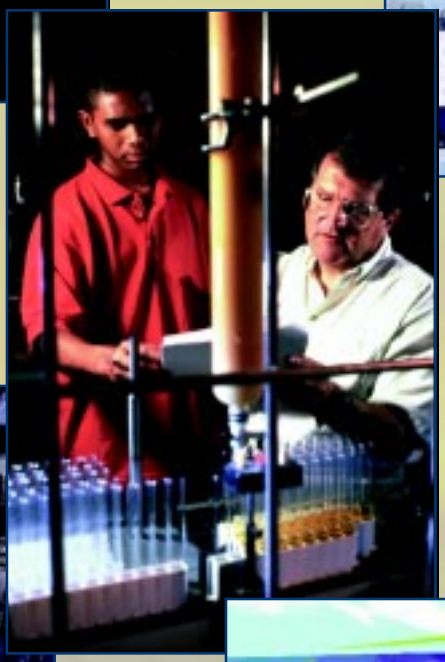


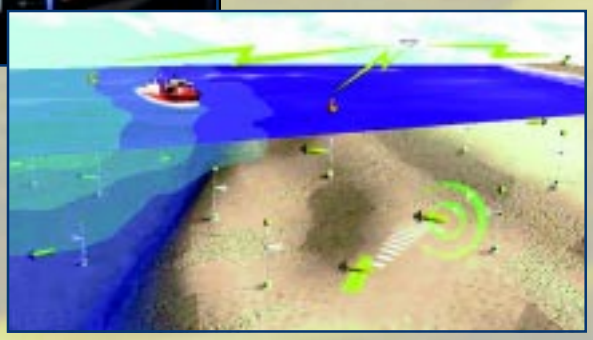
- Ask Navy and Marine Corps leaders to articulate prioritized, desired future capabilities that focus our most applied technology efforts.
- Ask scientists and engineers to develop the portfolio of basic technologies that address Department of the Navy (DoN) desired future capabilities.

- Strive to ensure S&T funding stability.
- Balance long-term opportunities and short-term demands; both technology "push" and requirements "pull" are essential.
- Stress capabilities selected by the Department of Defense (DoD), Navy, and Marine Corps leaders.
  - Affordable future capabilities that will allow us to dominate the littoral regions, from over the horizon to 200 miles inland, are being demonstrated in three initial, major program areas commonly known as technologies for DD21, Extending the Littoral Battlespace (ELB), and Mine Countermeasures (MCM).



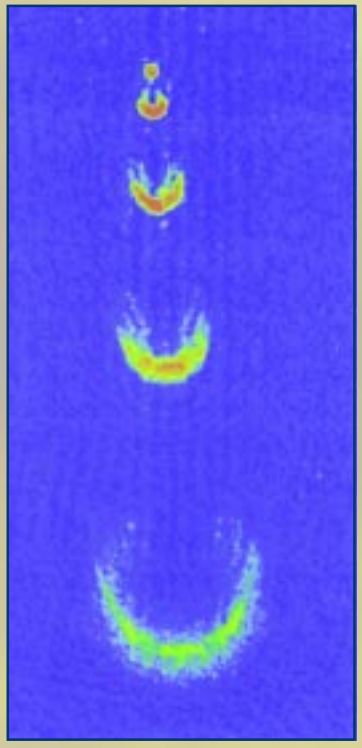






Executing Portfolio Decisions

- The Chief of Naval Research, reporting to the Secretary of the Navy, has full responsibility for planning, managing, and executing the S&T Portfolio in support of the Chief of Naval Operations and the Commandant of the Marine Corps.



- Every Naval S&T program will be judged on its contributions to affordability, Naval capabilities, and quality.
- S&T program plans are developed and updated by Office of Naval Research (ONR)—its Program Officers, its Naval Research Laboratory (NRL), and its International Field Office.
- ONR S&T programs integrate the best performers, discovery, invention, and the educational excellence of American academia with the entrepreneurial exploitation capacity of U.S. industry. When coupled with the unique strengths of DoN laboratories and centers, these partnerships maximize the opportunities for insertion of S&T options into new weapon systems.
- ONR S&T programs promote educational opportunities to ensure that the next generation of world-class scientists and engineers is available to work on DoN research.
- Partnering with DoD and other Federal agencies provides ONR the opportunity to exchange information and, often, to leverage S&T programs of mutual interest.
- The S&T program is developed in response to DoN and DoD capability requirements and to additional guidance of future Naval capabilities provided by the Navy and Marine Corps S&T Grand Challenges.

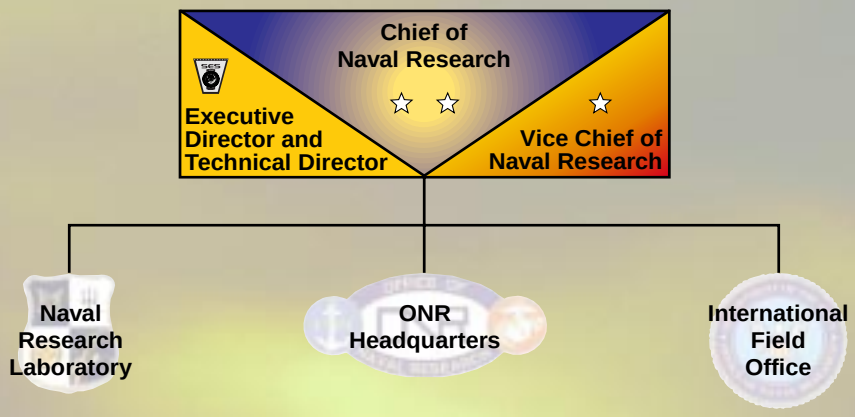
– Affordability –

S&T reduces the total cost of ownership by coupling process and product development, and by fostering nationwide manufacturing expertise.

The Organization Behind the Program

- ONR preserves a diverse, first-class team that is continually improving through training and personnel development optimized for S&T.

- Program Officers are the key element:



  - They directly manage S&T programs.
  - They identify and select the best performers from academia, government, and industry to execute DoN's S&T program.
  - They form partnerships with academia, naval laboratories, industry, the acquisition community, and the Operational Fleet/Force.
  - They sponsor programs to develop next generation scientists and engineers.

- NRL—DoN's world-class Corporate Laboratory—has scientists, engineers, and technologists who are core performing participants in the Department of the Navy S&T program at the bench and management levels.

- The ONR International Field Office is staffed by science and technology leaders who maintain a liaison with research and development agencies throughout the world to evaluate global research accomplishments and trends that may impact the U.S.

Office of Naval Research

800 North Quincy Street
Arlington VA 22217-5660

www.onr.navy.mil